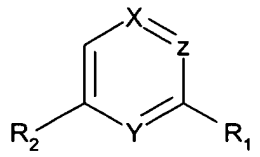
What is claimed is:

1. A compound of the formula (I):



(I)

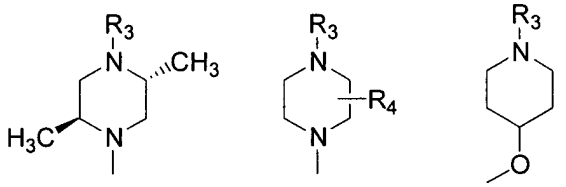
wherein

(i) X and Z represent both CH and Y represents nitrogen, forming a pyridine derivative, or

(ii) X represents C-CF_3, Z represents CH, and Y represents nitrogen, forming a 4-trifluoromethylpyridine derivative, or

(iii) Y and Z represent both nitrogen and X represents CH, forming a pyrimidine derivative, and

wherein R_1 and R_2 are each, independently, selected from a group A consisting of



or from a group B, consisting of aryl-C_1-C_6-alkyl, aryl-C_1-C_6-alkoxy, heteroaryl-C_1-C_6-alkoxy, aryloxy-C_2-C_6-alkoxy, heteroaryloxy-C_2-C_6-alkoxy, 1-indanyloxy, 2-indanyloxy, aryloxy, heteroaryloxy, arylthio, heteroarylthio, C_5-C_6-cycloalkylthio, C_5-C_8-alkoxy, C_5-C_8-alkylthio, C_3-C_6-alkynyloxy, C_3-C_6-alkenyloxy, fluoro-C_2-C_4-alkoxy, C_4-C_8-cycloalkyloxy, C_3-C_8-cycloalkyl-C_1-C_4-alkoxy, halogen, aryl-C_1-C_4-alkylthio, heteroaryl-C_1-C_4-alkylthio, aryl-C_1-C_4-alkylamino, heteroaryl-C_1-C_4-alkylamino, heteroaryl and aryl;

with the proviso that:

(i) R_1 and R_2 are different and are not both selected from group A or group B at the same time;

(ii) when both X and Z are CH and Y is N in formula (I), forming a pyridine derivative, and R_1 is 1-piperazinyl or 4-methylpiperazin-1-yl, then R_2 is other than 2-phenylethyl, benzyloxy, benzylamino, phenylthio, phenoxy, substituted phenoxy, C_4-C_8-cycloalkyloxy and C_3-C_8-cycloalkylmethoxy;

(iii) when X is CH and Z and Y both are nitrogen in formula (I), forming a pyrimidine derivative, and R_2 is 1-piperazinyl, then R_1 is other than phenoxy, phenyl or phenyl substituted by bromo, and C_5-C_8 alkoxy; and when R_2 is 4-methylpiperazin-1-yl or 4-(2-hydroxyethyl)piperazin-1-yl, then R_1 is other than 5-nitro-2-furyl;

(iv) when X is CH and Z and Y both are nitrogen in formula (I), forming a pyrimidine derivative, and R_1 is 1-piperazinyl, then R_2 is other than C_5-C_8 alkoxy;

and where R_3 is H or C_{1-4}-alkyl, allyl, 2-hydroxyethyl, 2-cyanoethyl, or a nitrogen protecting group, or a prodrug moiety;

R_4 is hydrogen, or C_{1-4} alkyl;

and wherein any aryl or heteroaryl residue, alone or as part of another group, in R_1 or R_2 may be independently substituted in one or more positions, by C_{1-4}-alkyl, C_{1-4}-alkoxy, C_{1-4}-alkylthio, C_{2-4}-acyl, C_{1-4}-alkylsulphonyl, cyano, nitro, hydroxy, C_{2-6}-alkenyl, C_{2-6}-alkynyl, fluoromethyl, trifluoromethyl, trifluoromethoxy, halogen, -N(R_5)(R_6), aryl, aryloxy, arylthio, aryl-C_{1-4}-alkyl, aryl-C_{2-4}-alkenyl, aryl-C_{2-4}-alkynyl, heteroaryl, heteroaryloxy, heteroarylthio or heteroaryl-C_{1-4}-alkyl, aryl-C_{1-4}-alkoxy, aryloxy-C_{1-4}-alkyl, dimethylamino-C_{2-4}-alkoxy; and

wherein any aryl or heteroaryl residue as substituents on aryl or heteroaryl, alone or as part of another group, in R_1 or R_2 in turn may be substituted in one or more postions, independently of each other by C_{1-4}-alkyl, C_{1-4}-alkoxy, halogen, trifluoromethyl, cyano, hydroxy or dimethylamino; and

R_5 and R_6 independently of each other are hydrogen, methyl or ethyl, or together with the nitrogen atom to which they are bound form a pyrrolidine, piperazine, morpholine, thiomorpholine or a piperidine ring;

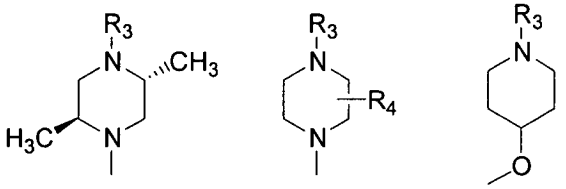
and pharmaceutically acceptable salt, hydrate, geometrical isomer, tautomer, optical isomer, *N*-oxide or prodrug form thereof.

2. The compound according to claim 1, wherein X and Z represent both CH and Y represents nitrogen, forming a pyridine derivative.

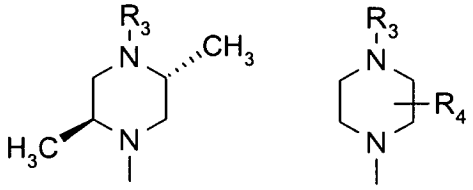
3. The compound according to claim 1, wherein formula (I) represents a 4-trifluoromethylpyridine derivative.

4. The compound according to claim 1 wherein Y and Z represent both nitrogen and X represents CH, forming a pyrimidine derivative.

5. The compound according to claim 1 wherein R_3 is hydrogen and R_1 or R_2 is selected from

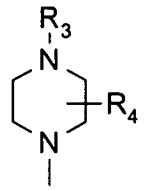


6. The compound according to claim 1 wherein R_1 or R_2 is selected from



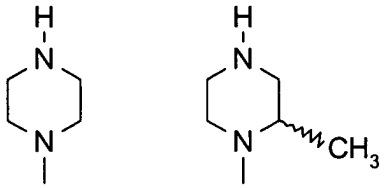
and where R_3 is hydrogen and R_4 is selected from hydrogen, methyl or ethyl.

7. The compound according to claim 1 wherein R_1 or R_2 is



and where R_3 is hydrogen and R_4 is selected from hydrogen, methyl or ethyl.

8. The compound according to claim 1, wherein R_1 or R_2 is selected from



.

9. The compound according to claim 1, which is selected from the group consisting of:

4-(Benzyloxy)-2-(1-piperazinyl)pyrimidine,

4-[(2-Methoxybenzyl)oxy]-2-(1-piperazinyl)pyrimidine,

2-{[3-(Benzyloxy)benzyl]oxy}-4-(1-piperazinyl)pyrimidine,

and their pharmacologically acceptable salts and solvates.

10. A pharmaceutical composition comprising a compound according to claim 1 as an active ingredient, together with a pharmaceutically acceptable carrier.

11. A method for the prophylaxis or treatment of a serotonin-related medical condition, comprising administering to a subject in need thereof a therapeutically effective amount of a compound according to claim 1.

12. The method according to claim 11, wherein the medical condition is related to the 5-HT_{2c} receptor.

13. The method according to claim 11 wherein the medical condition is an eating disorder.

14. The method according to claim 11, wherein the medical condition is obesity.

15. The method according to claim 11, wherein the medical condition a memory disorder.

16. The method according to claim 11, wherein the medical condition is a mood disorder.

17. The method according to claim 11, wherein the medical condition is an anxiety disorder.

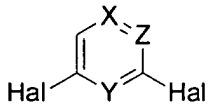
18. The method according to claim 11, wherein the medical condition is selected from sexual dysfunctions, epilepsy and urinary disorders.

19. The method according to claim 11, wherein the medical condition is pain.

20. The method according to claim 11, wherein the medical condition is substance abuse.

21. The method according to claim 11, wherein the medical condition is schizophrenia.

22. A method of making a compound of claim 1, taking a compound of the following formula:



wherein

(i) X and Z represent both CH and Y represents nitrogen, forming a pyridine derivative, or

(ii) X represents C-CF_3, Z represents CH, and Y represents nitrogen, forming a 4-trifluoromethylpyridine derivative, or

(iii) Y and Z represent both nitrogen and X represents CH, forming a pyrimidine derivative, and wherein

each Hal is independently a halogen;

and reacting the compound with one or more chemical reagents in one or more steps to produce a compound of claim 1.

23. A method of modulating serotonin in a subject comprising administering to the subject an effective amount of a compound of claim 1.

24. A method of modulating 5-HT_{2c} in a subject comprising administering to the subject an effective amount of a compound of claim 1.

25. The compound according to claim 1, wherein R_3 is an acyl-or alkoxycarbonyl group forming a cleavable amide or carbamate linkage.